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Investigation of the sodium dodecylsulphate (SDS) micellization using paramagnetic relaxation probes

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Abstract

Micellization of SDS in aqueous solutions is investigated by the nuclear magnetic relaxation method using Gd3+, Fe3+, Mn2+ ions as paramagnetic probes. Critical concentration of SDS micellization (1.5-2×10-3M) and degree of ions binding with micelles (0.2, 0.2 and 0.3 respectively) are determined. It is shown that the part of surfactant head groups bound with cations does not depend on the cations charge values and is equal to 60 % of SDS micellar part.